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## SYNOPSIS

In this study an attempt has been made to evaluate the characteristics of "mentally competent offenders" as revealed by vocabulary scatter on the Wechsler-Bellevue Intelligence Scale (Form I). An Experimental group was selected which consisted of forty adult male subjects who had been remanded for mental observation to the Provincial Mental Institute, Edmonton. During remand, each was found to be mentally competent and, upon standing trial, found guilty of the offence for which he was charged and sentenced accordingly. The experimental group, therefore, consisted of forty mentally competent offenders.

An hypothesis was made, stating that the test performance of mentally competent offenders should show significant differences from that of a normal population. In testing this assumption, the experimental group was compared to two normal control groups, Rapaport's Total Patrol Group and Well-adjusted Patrol Group. In making this comparison, "mental competence" characterized both the experimental group and the normal groups, while "social incompetence" described the experimental group of offenders only. It was believed that any differences in test performance might be attributed to the social inadequacy of the mentally competent offenders. By means of the critical ratio, the hypothesis was upheld since significant differences between the normal groups as compared to the experimental group were found to exist for the seven subtests - Information, Digit Span, Arithmetic, Similarities, Vocabulary, Picture Completion and Digit Symbol. However, the validity of these findings was



considered tenuous because of some discrepancy in the mean intellectual levels of the groups. It was therefore suggested that this aspect of the study be retested in the future, using normal control groups more comparable in intellectual level to the experimental group.

A second hypothesis was made - namely, that there is a characteristic psychometric pattern in vocabulary scatter on the Wechsler-Bellevue Intelligence Scale for mentally competent offenders. It was assumed that any scatter obtained for the experimental group might reflect social maladjustment rather than personality maladjustment for which the group had been clinically screened, and for which, according to the literature, there should be a minimum amount of scatter. By means of the critical ratio, the hypothesis was sustained since vocabulary scatter was found to exist for the experimental group on the three subtests Comprehension, Digit Span and Object Assembly.

Finally, a third hypothesis was formulated stating that the test performance of mentally competent offenders should differ significantly from that of offenders of another type and therefore, from offenders in general. Gurvitz's group of psychopaths resident in a penitentiary was selected as an offenders' control group for comparison with the experimental group. In this comparison, "social incompetence" described both groups of socially maladjusted and legally proven offenders; while "mental competence" described the experimental group only. It was held that any differences in test performance could have been in-



fluenced by the difference in mental competence between the groups. Using the critical ratio, it was found that there were significant differences in test performance on the subtests Comprehension and Object Assembly, thereby supporting the third hypothesis.

The methods of procedure and statistical findings of this investigation offer at least tentative evidence that the test performance on the Wechsler-Bellevue Intelligence Scale for mentally competent offenders differs significantly from that of a normal population, possibly due to some social disorder characterizing offenders. It would also seem substantiated that there is a characteristic psychometric pattern in vocabulary scatter for offenders of this kind which also may be attributed to the inability of these individuals to function adequately in society. This study also reveals that the test performance of this particular type of offender differs from that of other types of offenders, on the basis of mental competence, and therefore is not characteristic of offenders in general.





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THE UNIVERSITY OF ALBERTA

A STUDY OF THE CHARACTERISTICS OF  
MENTALLY COMPETENT OFFENDERS

AS REVEALED BY

VOCABULARY SCATTER ON

THE WECHSLER-BELLEVUE INTELLIGENCE SCALE (FORM I)

A DISSERTATION

SUBMITTED TO THE SCHOOL OF GRADUATE STUDIES

IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE  
OF MASTER OF ARTS

FACULTY OF ARTS AND SCIENCE

DEPARTMENT OF PSYCHOLOGY

by

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## Chapter I

### INTRODUCTION

The literature is rich in scatter analyses on the Wechsler-Bellevue Intelligence Scale for the various clinical groups. So far, the greatest number of studies on scatter has dealt with the subgroups of the functional disorders, particularly the schizophrenias and neuroses as these are perhaps the most frequently met in clinical situations. Considerable effort has also been directed to the study of organic brain disease, such as paresis, and to mental deficiency. However, while research with scatter has been concentrated upon groups showing disorders of personality and intelligence, relatively little work has been recorded on those individuals presenting social disorders and classified under the broad term of "offenders".

Lowrey (32) has stated of offenders, "If behavior is satisfying....to the individual but socially unacceptable, the result is 'problem' behavior, delinquency and crime." One may infer from Lowrey's statement that offenders reveal greater social maladjustment than personality maladjustment. Likewise in court, when they are considered to be mentally competent and responsible for their behavior, they are regarded as social (legal) problems rather than clinical problems.

The present study was conducted upon a group of offenders who, as remand cases, were clinically screened for mental competence. None of the experimental group, therefore, showed severe personality maladjustment, intellectual deficiency or





impairment by disease. All, on the basis of committed indictable offences, revealed social maladjustment or incompetence in social situations. Therefore, according to the criteria of "mental competence" and "social incompetence",<sup>1</sup> the group is considered to consist of social or legal problems rather than clinical problems.

Among the few attempts which have been made to establish scatter patterns on the Wechsler-Bellevue Intelligence Scale for the various types of offenders are those recorded on institutionalized psychopaths (13, 17, 18, 29, 49, 55) and prison populations. (2, 10). The results of these studies will be discussed in a later chapter.<sup>2</sup> These investigations differ from the present one in that none of the groups studied were selected on the basis of mental competence. In addition to being social problems, some of the groups were classified as clinical problems, showing disorders of personality or defective intelligence (2, 50), while others were not necessarily examined for mental competence (13, 17, 18, 29, 49, 55).

Although the definition of "psychopathic personality" as cited by most authorities (11, 32, 42)<sup>3</sup> may imply mental competence, this was not a criterion in selection of the psychopathic groups. While it may be argued that the socially incompetent individuals of these groups might also have been mentally competent,

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1. "Mental Competence" and "Social Incompetence" are defined on pp. 9 and 10.
2. Chapter II, pp. 19 - 24.
3. "Psychopathic personality" is defined on p. 4



this possibility is considered a result rather than an aspect of selection according to the criteria of psychopath in the present study. Therefore, it is on the basis of clinically determined mental competence that the offenders of the present study differ from those on whom studies have been recorded in the literature.

The conspicuous absence in the literature of scatter analyses with mentally competent offenders may be attributed to the fact that these individuals do not fit into any sharply defined nosological category of the clinical disorders. Because their maladjustment is considered to be essentially of a social nature, they are not available to research as distinct clinical entities. Therefore, studies of this kind are more unlikely or difficult to arrange.

The mentally competent offender, when clinically diagnosed, is generally regarded as a "pathological personality type"<sup>1</sup> having a disorder of character (37). His ethical and social values are considered incompatible with those of society, frequently leading to a life-long behavior-pattern of maladjustment. One classified type of pathological personality is the "inadequate" individual characterized by the inability to adjust to specific situations and meet life's demands. Another type is the "antisocial" person showing emotional immaturity, defective judgment and inability to learn by experience. The "asocial" personality which frequently develops in an abnormal moral environment leading to disregard of the usual social codes is still another type. "Sexual deviants" are likewise included in this

1. Podolsky (41) defines "pathological" as "findings (in the personality) which are unusual in degree, or occur within the wrong age period."



category. However, the most commonly known pathological personality is the "psychopath" who is characterized by social maladjustment and asocial behavior, without defective intelligence, functional or organic disease, as defined by Cleckley (11) and Preu (42). Clinical diagnoses for mentally competent offenders are therefore various when specified, according to the psychiatric setting.

Regardless of attempts on the part of clinicians to refine diagnoses, mentally competent offenders remain problems to society since they are not generally regarded as real clinical problems. Thus there would seem to be a need for further study of the characteristics leading to their incompetence in social situations and subsequent legal difficulties. With this idea in mind, it is to be hoped that some practical information for further investigation of offenders may be derived from the present study on the scatter characteristics of mentally competent offenders selected from a group of offenders remanded for mental observation.

The question may be raised as to whether the term "mental competence" might also apply to offenders in general who were not remanded for mental observation as were the experimental group. It may be asked further if the more general types of offenders are not to be considered necessarily mentally competent until they are proven otherwise. However, the occasional commitment of prisoners undergoing sentence to a mental hospital provides evidence that offenders in general are not all mentally competent. If all periods of remand were for mental observation, clinical evaluation would likely bear this out.

The mental competence of the offenders comprising the experimental group was questioned from their behavior following





the time of offence by clinically untrained observers, but confirmed by clinical examination. On the other hand, the mental competence of offenders in general was not questioned to the extent of making remand for mental observation and therefore was never clinically evaluated. It may be stated that the experimental group consisted of only the most obvious cases who were consequently remanded for mental observation, while among offenders in general may be included those individuals who were missed by untrained observers but should have been likewise remanded for mental observation. Therefore, while the selection of the experimental group provided a clear group of mentally competent offenders, general offenders probably should not be considered as necessarily mentally competent until clinically evaluated as such.

#### Statement of the Problem.

The purpose of this study is to evaluate the characteristics of mentally competent offenders remanded for mental observation as revealed by vocabulary scatter on the Wechsler-Bellevue Intelligence Scale. An attempt will be made to discover whether the test performance of offenders of this kind differs significantly from that of a normal population. Should there be a difference, the conclusion may be that their test performance shows a characteristic scatter pattern. It also may be assumed that the test performance of this particular type of offender is not characteristic of offenders in general, since it is expected to differ from that of another particular type of offender and from offenders in general.





Hypotheses concerning the problem may be stated as:

1. The test performance on the Wechsler-Bellevue Intelligence Scale for mentally competent offenders differs from that obtained for a normal population.
2. There is a characteristic psychometric pattern on the Wechsler-Bellevue Intelligence Scale for mentally competent offenders.
3. The test performance on the Wechsler-Bellevue Intelligence Scale for mentally competent offenders differs from that of other offenders.

#### Definition of Terms.

Wechsler-Bellevue Intelligence Scale: This test was used in the present study because it provides an excellent instrument for measuring scatter. It is composed of eleven subtests of relatively homogenous item-groups, the scores of which are expressed in a single scale of equated and directly comparable weighted (standard) scores. The subtests are distributed in a Verbal Scale and a Performance Scale, which comprise the Full Scale. The Verbal Scale contains Information, Comprehension, Digit Span, Arithmetic and Similarities subtests, with Vocabulary as optional. The Performance Scale consists of Picture Arrangement, Picture Completion, Block Design, Object Assembly and Digit Symbol subtests. The sum of the weighted scores for the Verbal Scale, Performance Scale and Full Scale are converted into respective I.Q.'s by means of tables corrected for age. The test therefore gives a Verbal I.Q., a Performance I.Q. and a Full Scale I.Q. A complete description of the test with instructions for administration and scoring may be found in Wechsler's manual (56-c).



Scatter: In 1942, Bijou (5) defined a "psychometric pattern" as "a statement, numerical or verbal, of the relationship existing between two or more test ratings." This early definition has been amplified to the concept of "scatter" defined by Rapaport (45) as "the pattern or configuration formed by the distribution of the weighted subtest scores of an intelligence test." Rabin (44) defines it as "the variability of subtest scores." Mayman (35) similarly defines scatter as "unevenness in the level of attainment on different tests."

Vocabulary scatter, the measure used in the present study, was introduced by Rapaport (45) who defines it as "the difference between its score (that of the subtest) and the score on Vocabulary." Reasons for its application in the present study will be discussed in the next chapter.<sup>1</sup>

Research with scatter has for the most part been directed to the clinical problem of associating particular scatter characteristics with particular clinical entities (56-c). The literature generally upholds Rapaport's statement that "the scatter is a pattern determined by the individual's development and by his type of adjustment or maladjustment." Therefore, it is assumed that in a well-adjusted person, the various abilities function at a near-equal level and should be reflected in little discrepancy in test performance or in a minimum amount of scatter.

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1. Chapter II, pp. 16 - 19.



Likewise, extensive scatter in wide subtest score deviations is considered indicative of some personality maladjustment as shown in unevenness in functioning and development of abilities (23, 45).

The main purpose of scatter analyses has been in comparing the efficiency of the different intellectual functions as measured by the achievements on the different subtests and associating them with different types of personality maladjustment (45). An expectancy of the present study may be that scatter could also be associated with social maladjustment or incompetence, thereby reflecting social disorders as revealed in mentally competent offenders.

Remand: In 1923, Mozley and Whitely (39) legally defined "remand" as:<sup>1</sup>

"Remand is the recommitment of an accused person to prison, or his readmission to bail on the adjournment of the hearing of a criminal charge in a police court. The remand, in the case of a person charged with an indictable offence, must not exceed eight days. A remand may be granted for securing the attendance of witnesses, for making inquiries into previous career of the accused, or other reasonable cause."

In the case of a person charged with an indictable offence, remand is usually for a period of eight days, but may be renewed for further observation if deemed necessary. According to the Insanity Defence of the Criminal Code of Canada (12),

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1. This early definition of "remand" has been generally adhered to in later definitions, though stated less precisely as by Black (6) and by Ballentine (4).





an accused person whose mental competence may be questioned either at the time of the offence or while in custody after finding, may be remanded for mental observation.<sup>1</sup> Therefore, remand may be the committal of an accused person to a mental hospital for observation as to his mental state. The subjects of the present study were remanded for mental observation to the Provincial Mental Institute, Edmonton.

Mental Competence: Black (6) defines this legal term as:

"such a measure of intelligence, understanding, memory, and judgment (relative to the particular transaction) as will enable the person to understand the nature of his act."

In court, the M'Naghten rules (54) are still regarded as authoritative when the mental competence of an accused person is doubted.<sup>2</sup> Whenever evidence is given in trial that an accused person was insane or mentally incompetent when committing an offence, he may be acquitted on an account of insanity and kept in custody as the court sees fit. Unless found to be defective in intelligence or with functional or organic disease impairing faculties of understanding, memory and judgment, he is deemed mentally competent, and fit to stand trial (12). Following clinical examination, the remand cases of the experimental group were considered to be mentally competent and responsible for

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1. Remand for mental observation is made by a Police Magistrate or Justice of the Peace in the Province of Alberta (12).
  2. The M'Naghten rules are restated in Section 16 of the Criminal Code of Canada (12) as outlined in Appendix A.





their behavior at the time of offence. In this study, the normal control groups were also found to be mentally competent.

Social Incompetence: This term has been used to signify the social maladjustment characterizing legally proven offenders. Since these individuals may be deemed not capable of functioning adequately in society, they are considered to show "social incompetence". Accordingly, the experimental group of mentally competent offenders, as well as the offenders' control group used in this study, were considered to be socially incompetent, while the normal control group had been found socially competent.

Offender: This term refers to an individual who has committed an offence legally defined as "a breach of the criminal laws" (6).

Since each of the remand cases of this study was found guilty of committing an offence when standing trial, and punishable under certain laws (12), they comprise a group of offenders. Since each had been found mentally competent during remand for mental observation, they make up a particular kind of offenders' group selected on the basis of mental competence.

As stated earlier in this chapter,<sup>1</sup> other groups of offenders not remanded for mental observation and therefore not clinically examined, may contain mentally unbalanced individuals. At least there is no clear assurance that they do not.

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1. Pp. 4 - 5.



## Chapter II

### SURVEY OF THE LITERATURE

This chapter will be a survey of the literature relative to the problem of evaluating characteristics of mentally competent offenders as revealed by vocabulary scatter on the Wechsler-Bellevue Intelligence Scale. In order to render a primary concept of this study, that of scatter analyses, more intelligible, a brief survey of its development leading to measures in current use will be made. Since vocabulary scatter is the particular measure to be used in this investigation, there will be a discussion concerning reasons for its employment. Finally, recorded scatter analyses with other groups of offenders will be inspected.

#### Historical Development of Scatter Analyses

The phenomenon of scatter has occupied an important position in psychological research almost ever since attempts were first made to measure general intelligence by batteries of different types of tests. As early as 1905, Binet (7) observed and analyzed variations in test performance when he applied the Binet-Simons tests to groups of children. After the translation and revision of the Binet tests by Terman in 1916 (51), interest in scatter extended to this continent. However, the hopes of investigators that there might be pathological significance in quantitative scatter on the Stanford-Binet, which could lead to clinical differentiation, have never been substantiated in the literature (19, 22, 35, 48). In reviewing the literature up to 1937, Harris and Shakow (19) concluded, "Research up to now has



failed to demonstrate clearly any valid clinical use for numerical measures of scatter". In 1946, this was still contended by Mayman (35) who stated, "...we may conclude that the many studies of scatter on the Stanford-Binet have, at best, borne only inconclusive results".

Interest in scatter received new impetus with the introduction of the Wechsler-Bellevue Intelligence Scale in 1939 (56-a). Investigators generally support the tenet that scatter analysis is more applicable on this scale than on the Stanford-Binet, since it is a point scale rather than an age scale (40, 44).

The earlier studies of scatter on the Wechsler-Bellevue made use of "inter-individual" comparisons. One method used in this approach was in comparing the means of weighted subtest scores of one group with the respective scores of another group. The first scatter analysis on the Wechsler-Bellevue using this method was reported by Gilliland in 1940 (15). However, its limitations were soon realized in contradictory findings (16, 57).

Mayman (35) writes of inter-individual comparisons that "these studies do not deal with scatter pattern; they measure impairments in individual subtests, rather than test-score inter-relations."

Kogan (26) states that this method "does not take into consideration that the scores of individuals of different I.Q. cannot be properly summed without first reducing scores to common baselines....scatter may be obscured if there is an appreciable range of intellectual levels in the subjects of a group." Although the inter-individual method proved promising in research, it has





generally been considered much too gross, establishing only the most obvious trends.

With the growing need for more precise methods of analysis, measures of "intra-individual" comparison were introduced. Subtest variability reflecting the relationship within subtest scores of each individual in a group replaced previous methods. Brown, Rapaport et al (8) first suggested this approach in 1941 when they calculated the deviation of Verbal scores from the Verbal mean, and Performance scores from the Performance mean.

In his second edition of the manual, Wechsler (56-b) was the next to use intra-individual comparisons in attempting to establish scatter patterns for the various clinical groups. Magaret (33) also used deviation scores in showing that schizophrénics show more scatter than do non-psychotics. By 1946, Mayman (35) concluded, "It appears that consistent and statistically significant results are obtained by various investigators when intra-individual measures of scatter are used."

Gradually the many possible subtest score inter-relations were exploited in combinations of intra-individual measures of scatter. Wechsler (56-b) first suggested these procedures in the forms of (1) Verbal minus Performance score, (2) deviation from the mean subtest score, (3) specific subtest score inter-relations. The first published study employing combinations of intra-individual measures of scatter was by Levi (29) on a group of adolescent psychopaths.





### Measures of Scatter Currently Employed

The three main measures of scatter used in research today are demonstrated in the work of Rapaport, Gill and Schafer (45) recognized for its significant contribution in this field. These investigators utilized vocabulary scatter, mean scatter and modified mean scatter in this order.

Vocabulary scatter was formally introduced by Rapaport and his co-workers, although the measuring of variability of test scores from Vocabulary was first systematically used by Wells in 1927 (58). In 1941, Babcock (3) elaborated the relationship between Vocabulary and other tests in her well-known "level-efficiency theory of intelligence." In 1945, Rapaport (45) established its use as a valuable measure of scatter on the Wechsler-Bellevue scale, and defined the vocabulary scatter of a subtest as "the difference between its score and the score on Vocabulary."

Mean scatter was used by Rapaport (45) as originally introduced by Brown (8), but re-defined as "the difference between any subtest score and the average of all the subtest scores, excluding the scores of Digit Span and Arithmetic subtests." The Arithmetic and Digit Span subtests were excluded in computations since their scores were found impaired in most groups, and it was reasoned that including them would lower the true representativeness of the mean. To mitigate extreme differences of scores in estimating mean scatter, deviations of Verbal subtests from the Verbal mean, and Performance subtests from the Performance mean were used as earlier introduced by Brown.



Modified Mean Scatter was introduced to further delimit the deficiencies of Mean scatter. This measure is defined by Rapaport (45) as "the difference between any Verbal subtest score, including Vocabulary but excluding Digit Span and Arithmetic, and the mean of all the other Verbal subtest scores; or the difference between any Performance subtest score and the mean of all the other Performance subtest scores."

In addition to the measures of scatter employed by Rapaport, other methods have more recently been proposed. The measure of Altitude Scatter was suggested by Whiteman in 1950 (59). In using the highest subtest scores as reference points, Whiteman considers intelligence as "the level of maximum personality integration." This author further states, "Wide deviations between capacities and functional ability in life signalize maladjustment, as large discrepancies between altitude and selective scores on psychometric batteries signalize disorganization." Although no further studies appear to have used Altitude scatter, it may be that further research could establish it as a measure comparable in validity to the Mean and Vocabulary measures.

In 1950, Holzberg and Deane (21) attempted to measure intra-test scatter on the Wechsler-Bellevue by comparing the means of one group to another, and testing for significant differences. Alimena, in 1951 (1) also compared subtest scores to arrive at scatter dispersion and further provided a ratio scale for the different ranges of age and I.Q. However, as is the case of the measure proposed by Whiteman, those proposed by Holzberg and Dean, and by Alimena, do not seem to have been further tested or applied in research.



### Reasons for Using Vocabulary Scatter in the Present Study

Since Vocabulary has been used as a baseline from which to measure scatter in the present study, reasons warranting its use deserve brief discussion. That it is a fair representation of an individual's intellectual capacity and shows relatively high resistance to both functional and organic impairment may be concluded reasonably from the literature:

1. The vocabulary level of an individual has long been considered a reliable estimate of his general intelligence. Regarding the 1916 revision of the Binet tests, Terman (51) held that the Vocabulary test was among the most reliable tests on the scale. With reference to the 1937 Revision, Terman (52) stated:

"We have found the vocabulary test to be the most valuable single test in the scale. Its interest value is high, it presents a familiar task to the subject, and the fact that it begins with words in common use and increases rapidly in difficulty gives the examiner a rapid survey method of estimating the subject's ability."

Wechsler (56-c) supports Terman's contention as applied to the Bellevue scale by a coefficient of correlation of .85 between the Vocabulary subtest score and the total intelligence score, exceeding that obtained for any other subtest score. Hebb (20) regards vocabulary as an index of one's level of past development, and has demonstrated that, while vocabulary is not completely unaffected, it remains at nearly its normal level. Although vocabulary is necessarily influenced to some degree by impairment, investigators (30, 43, 45, 46, 48, 56-c) have come to regard it as a relatively excellent indicator of general





intelligence.

While vocabulary has been noted to increase with educational attainment, Lewinski (30) has demonstrated that an individual's absorption of culture and education tends to vary with his level of general intelligence. Lewinski writes that "while a positive relationship exists between vocabulary and both intelligence and education, the relationship between vocabulary function and the former is more marked." Jastak and Gordon (25), however, express criticism against vocabulary as a measure of intelligence, based on the fact that in non-verbal individuals, the intelligence level may be under-estimated, a fact which Wechsler (56-c) also has pointed out.

2. Vocabulary resists organic deterioration more than any other subtest. Wechsler (56-c) utilized the Vocabulary subtest as among those least influenced by organic impairment in constructing his Index of Deterioration. Reichard and Schafer (46) also believe that because of its relatively high resistance to deterioration, the Vocabulary score may be helpful in estimating impairment in other functions. Capps (9) found that mental deterioration in epilepsy is accompanied by a general impairment of vocabulary level. On the other hand, Landis (28) views vocabulary level taken as an index of one's original intellectual level as an imperfect indicator of deterioration. Yacorzinski (60), although referring to the Babcock test, proposes a superficial stability of vocabulary level in deteriorated individuals, observing that, while the same end-result in defini-





tion of words may be reached, the quality of responses is usually affected.

3. The Vocabulary subtest has also been found least influenced by personality maladjustment and disorganization. Jastak (24) holds that the Vocabulary test of the 1916 Stanford-Binet gives the most accurate measure of native intelligence in the majority of cases with mental disorders. Rabin (43, 44) reports that on the Wechsler-Bellevue scale, psychotics tend to have a higher vocabulary score when compared with other subtest scores than do non-psychotics. Similar findings have been cited by Magaret (33) and by Magaret and Wright (34).

However, the Vocabulary subtest is also found to be least influenced by functional impairment according to the type of personality maladjustment. Rapaport (45) found that vocabulary is "profoundly impaired" in deteriorated schizophrenics, psychotic depressives and neurasthenics, with the highest vocabulary scores accompanying intellectualized or compulsive defense mechanisms found commonly in over-ideational pre-schizophrenics, paranoid conditions, obsessive-compulsive neuroses, and the anxiety and depression groups.

Although negative findings have accompanied positive evidence supporting the Vocabulary subtest score as a reliable baseline from which to measure scatter, the statement of Rapaport (45) warranting the vocabulary scatter measure has been generally accepted in the literature:

"The empirical basis for adopting the Vocabulary score as one basis of scatter computation is



that vocabulary has long been known to be a fair representative of the intelligence level, and to remain relatively unimpaired by maladjustment."

On the basis of Rapaport's statement, and the supporting contentions cited in the literature (9, 20, 30, 43, 44, 45, 46, 48, 50, 56-c), the measure of vocabulary scatter will be employed in the present study.

### Investigations with Groups of Offenders

Since this investigation deals with a group of mentally competent offenders, it would be of pertinent interest to review studies with similar groups in the literature. However, no investigations with offenders of this kind have been recorded, and research with other types of offenders has been limited. At best, studies most closely resembling the present one have dealt with institutionalized psychopaths (13, 16, 17, 29, 50, 55) and prison populations (2, 10, 16, 17), none of which was selected according to the criterion of mental competence, but all revealed social incompetence. The studies most relative to the present investigation will be reviewed in this section.

1. Institutionalized Psychopaths: Positive findings for a scatter pattern characteristic of psychopathy have been cited by Levi (29), Wechsler (56-c) and Schafer (47). In 1943, Levi (29) studied the Wechsler performance of 45 institutionalized adolescent psychopaths and concluded that the mean Performance I.Q. was significantly greater than the mean Verbal I.Q. Levi further found that in his group the sum of Picture Arrangement and Object Assembly mean weighted subtest scores exceeded that of Picture Completion and Block design.



Wechsler (56-c), as Levi, holds that, in adolescent psychopaths, the Performance I.Q. is characteristically greater than the Verbal I.Q. and that the Picture Arrangement score is frequently high. Wechsler further established a mean scatter pattern as a diagnostic aid in detecting psychopathy in adolescent males.

Schafer (47) likewise considers a superior Performance level over the Verbal level as characteristic of psychopathy. This investigator has observed that low scores for Comprehension and Similarities, high scores on tests of visual-motor co-ordination and speed, sometimes high Digit Span, Picture Arrangement and Picture Completion scores are typical of the psychopath.

At the same time, findings negating a scatter pattern characteristic of the psychopathic personality have been cited by Van Vorst (55), Strother (50), Franklin (13), Sloan and Cutts (49) and, perhaps most emphatically, by Gurvitz (17, 18).

Gurvitz's large-scale study with institutionalized psychopaths, completed in 1949, is of importance to this investigation since an offenders' control group has been selected from it for comparative purposes.<sup>1</sup> In Gurvitz's investigation, the experimental group consisted of 84 white male psychopaths resident in a penitentiary, ranging in age from 19 to 35, and in I.Q. from 80 to 119. This group was matched with a control group of inmates resident in the same prison, "without mental disease" according to race, sex, education, I.Q., age and occupational status. Wechsler's

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1. A description of the offenders' control group used in this study may be found in Chapter III, pp. 34 - 37.







standardizing population was used as a normal control group. Comparison of the experimental group with both a prison control group and a normal control group revealed that: (1) there was no characteristic pattern for the experimental group of psychopaths on the Wechsler-Bellevue scale, and the patterns proposed by Levi, Wechsler and Schafer were found not applicable to adults; (2) the test pattern on the Wechsler-Bellevue for adolescent psychopaths and adult normal prisoners appears to be identical to that of a group of randomly selected subjects which were used to standardize the Wechsler-Bellevue.

Gurvitz contends that test data alone are not reliable indicators of psychopathy since the various backgrounds, educational levels, socio-economic statuses and character traits also play a role in determining test patterning. This investigator further points out that psychopaths are not generally tested during emotional upheavals, but rather in quiescent states, so that their test patterns are apt to be more individualized than characteristic. In criticizing previous attempts to establish a psychometric pattern for psychopathy, Gurvitz writes that the social history and clinical interview offer a more reliable diagnosis than one obtained from psychological tests.

The earlier studies provided supporting evidence to Gurvitz's findings. In 1943, Van Vorst (55) found no characteristic response pattern in the Wechsler-Bellevue performance of a group of delinquent boys who had been diagnosed as psychopathic. Strother, in 1944 (50) also found no consistency in Wechsler



signs, excepting a low Arithmetic score in the test records of a group of 14 psychopaths. Franklin's analysis (13) of Wechsler patterns for delinquent Negro boys also showed no characteristic scatter pattern. Sloan and Cutts (49), studying institutionalized defective delinquents, concluded that there was some similarity in the Wechsler patterns of mental defectives and psychopaths, but this finding was not considered valid since the normal control groups revealed as many psychopathic signs.

2. Prison Groups: Wechsler signs for psychopathy have been tested further in studies with prison populations, not necessarily considered psychopathic. In 1949, Altus and Clark (2) studied two institutionalized behavior problem groups, one an Army group, the other a group of adolescent male juvenile delinquents. The Army group consisted of 84 male prisoners court-martialled for relatively serious military offences and remanded to an Army Disciplinary Barracks. In this group, the age ranged beyond 20 years; the I.Q.'s, all Borderline Defective, ranged below 80. With the exception of the Vocabulary subtest, the Full Scale of the Wechsler-Bellevue had been administered and the mean scores and percentage deviations of the subtests equated. The statistical findings of this study reveal: (1) "strikingly low" performance in Arithmetic; (2) a high Object Assembly score; (3) a depressed Verbal I.Q. in comparison with the Performance I.Q.; (4) negative mean deviations for all verbal subtests excepting Similarities, which was only slightly positive; (5) positive mean deviations for all Performance subtests excepting Digit Symbol, which showed



no trend. Although this group was not judged to be psychopathic, the authors found that Levi's signs for psychopathy (30) were supported in the sum of Picture Arrangement and Object Assembly being greater than the sum of Picture Completion and Block Design.

In 1950, Clark and Moore (10) studied a group of Army and Airforce prisoners, using the mean scatter measure. As in the study by Altus and Clark (2), the subjects had been sentenced by a General Court Martial and remanded to a Disciplinary Barracks. The subjects were selected according to three categories of psychiatric diagnoses:<sup>1</sup> 161 subjects showing "no neuropsychiatric disorders", 157 subjects diagnosed as "immaturity reactions", 224 subjects diagnosed as "pathological personality types." Analysis of results of the mean scatter measure reveals that for each of the prisoner groups: (1) the Verbal subtests show a trend toward negative deviation from the mean; (2) the Performance subtests, with the exception of Digit Symbol, show positive deviation from the mean; (3) Object Assembly shows the highest positive deviation; (4) the sum of Picture Arrangement and Object Assembly is greater than the sum of Picture Completion and Block Design. The findings of Clark and Moore correspond closely to those of Altus and Clark. Both these studies support a scatter pattern indicative of psychopathy, as proposed by Levi (29), Wechsler (56-c) and Schafer (47), in prison groups.

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1. Diagnosis was according to the War Department Technical Bulletin No. 203, which was used by the United States Army.







In conclusion, while the literature contains relatively few scatter analyses for groups of offenders, a common psychometric pattern has been frequently upheld, but as frequently contradicted. The Wechsler-Bellevue signs introduced by Levi, Weschsler and Schafer for psychopaths have been demonstrated among prison groups by Altus and Clark (2) and by Clark and Moore (10). On the other hand, Gurvitz (17, 18), as several workers before him (13, 31, 50, 55), was unable to show any scatter pattern characteristic of the psychopathic personality in prison, or for his prison control group.

Thus the question of a scatter pattern for offenders, whether institutionalized psychopaths or prisoners, has been relatively untouched in research, and findings have been inconsistent. The present investigation upon a group of mentally competent offenders, therefore, is considered to be a pilot study in this wide-open field of research.



### Chapter III

#### PROCEDURE

In this chapter, the method of selecting the experimental group will be presented. The administration and scoring of tests will be discussed and, for interest, a description of the experimental group will be given. The control groups used for comparison with the experimental group also will be described, and reasons for selecting them examined. Finally, the methods used for determining the results will be outlined briefly.

#### Selection of the Experimental Group

The selection of a group of mentally competent offenders was made possible by available files of cases remanded for mental observation.<sup>1</sup> The test records for these cases were extracted from hospital files according to the limitations that: (1) white males of Canadian birth only were chosen in order to limit variables of race, sex and culture; (2) the age range was established from 21 to 45 years inclusive for selection of an adult population.<sup>2</sup>

Following this preliminary selection of test records, relative data accompanying each case were checked according to

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1. Remand was made to the Provincial Mental Institute, Edmonton.
2. It would have been more desirable to further restrict the age range for the experimental group - e.g., from 21 to 30 years inclusive. However, since cases meeting the selection criteria were found to be relatively infrequent in hospital files, this would not have been possible without further reducing the size of the experimental group.



information available from hospital and court files to include only: (a) subjects who, during remand for mental observation, were found by clinical examination to be mentally competent;<sup>1</sup> (b) subjects who had no record of previous admission to a mental hospital, so that variables of psychoses, severe personality maladjustment and mental deficiency or impairment by disease were considered excluded; (c) subjects who, in court, were found guilty of committing the offence for which they were accused and punished accordingly.<sup>2</sup> Cases withdrawn or dismissed in court were not included, so that the group consisted entirely of legally proven offenders.

Forty test records were selected from hospital files according to the above criteria. The experimental group was therefore to consist of 40 mentally competent adult male offenders.

#### Administration and Scoring of Tests

The Full Scale of the Wechsler-Bellevue Intelligence Scale (Form I), including the Vocabulary subtest, had been administered to each of the 40 offenders comprising the experimental group while

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1. A statement concerning the mental competence of each remand case was made by Dr. A. D. MacPherson, Medical Superintendent of the hospital. On rare occasions on which Dr. MacPherson was absent, an Acting Superintendent made this judgment.
  2. Superintendent Kingzett of the Edmonton Police Department very kindly furnished information concerning the fate of cases remanded in the City Police Court.

Judge A. Bisset of the Family Court in Edmonton provided the necessary information for local juvenile and domestic offences.

Mr. G. H. Hall, Secretary to the Attorney General's Department in the Legislative Building, Edmonton, furnished the necessary data for cases remanded outside the district of Edmonton.





being remanded for mental observation.<sup>1</sup> Directions outlined in Wechsler's manual had been rigidly adhered to with the exception of alterations made in the Information subtest to render it more appropriate for Canadian subjects.<sup>2</sup> Each test record was methodically checked for chance errors in scoring of items, subtests and quotients. Variables in administration and scoring were therefore reduced to a minimum insofar as possible.

### Description of the Experimental Group

As a point of interest in this investigation, the experimental group is described with the aid of tables showing the number and percentages of the group included in the various age ranges, educational levels, occupational and marital statuses. Tables listing offences committed and subsequent sentences imposed on the group are also presented. Test data and relevant information for each case are to be found in Appendix B.

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1. Mrs. W. M. Simmons, Consulting Psychologist, Greenboro, N.C., (formerly Miss Roberta B. Kiefer, Psychologist for the Provincial Mental Institute, Edmonton) had administered tests to 24 of the subjects from 1951 to 1953 inclusive. The remaining 16 tests were administered during 1954 and 1955.

2. In the Information subtest (56-c), the following items:

- (a) Who is President of the U.S.?
  - 1. Who was President before him?
  - 9. How tall is the average American woman?
  - 15. What is the population of the U.S.?
  - 16. When is Washington's birthday?

were replaced by:

- (a) Who is Prime Minister of Canada?
  - 1. Who was Prime Minister before him?
  - 9. How tall is the average Canadian woman?
  - 15. What is the population of Canada?
  - 16. When is Queen Victoria's birthday?



Table IAge Range of Experimental Group (N = 40)

<u>Age in Years</u>	<u>No. in Group</u>	<u>Percentage in Group</u>
21 - 25.....	11	27.5
25 - 30.....	12	30.0
30 - 35.....	8	20.0
35 - 40.....	7	17.5
40 - 45.....	2	5.0
Total.....	40	100.0
Mean age of group.....	29.8 years	

As indicated in Table I, the mean age of the experimental group was estimated as 29.8 years. 57.5% of the group were between 21 and 30 years of age, while beyond the age of 30, the frequency of offenders was related inversely to increases in age.

Table IIEducational Level of Experimental Group (N = 40)

<u>Grade Completed</u>	<u>No. in Group</u>	<u>Percentage in Group</u>
I.....	1	2.5
V.....	3	7.5
VI.....	1	2.5
VII.....	2	5.0
VIII.....	14	35.0
IX.....	4	10.0
X.....	7	17.5
XI.....	3	7.5
XII.....	2	5.0
2 years University..	1	2.5
3 years University..	1	2.5
University degree...	1	2.5
Total.....	40	100.0
Mean educational level.....	8.9 grades	



Table II shows the level of formal education completed by the group as ranging from Grade I to a university degree. The mean educational level of the group was established at 8.9 grades, with 35% having completed Grade VIII.

Table III

Occupational Status of the Experimental Group (N= 40)

<u>Occupational Category</u>	<u>No. Employed</u>	<u>Percentage Employed</u>
Laborer.....	17	42.5
Tradesman <sup>1</sup> .....	5	12.5
Salesman.....	3	7.5
Farmer.....	2	5.0
Driver.....	2	5.0
Mechanic.....	2	5.0
Railroad Employee.....	2	5.0
Cook.....	2	5.0
Teacher.....	2	5.0
Photographer.....	1	2.5
Accountant.....	1	2.5
Student.....	1	2.5
Total.....	40	100.0

In Table III, 13 vocational categories pertaining to the experimental group are listed in order of frequency. The table shows that 42.5% of the group were employed as laborers, while 5% were professionally employed.

Table IV

Marital Status of the Experimental Group (N= 40)

<u>Age in Years</u>	<u>Married</u>		<u>Single</u>	
	<u>No.</u>	<u>%</u>	<u>No.</u>	<u>%</u>
21 - 25.....	4	10	7	17.5
25 - 30.....	6	15	6	15.0
30 - 35.....	3	7.5	4	10.0
35 - 40.....	6	15	2	5.0
40 - 45.....	2	5		
Total	21	52.5	19	47.5

1. The 5 subjects occupationally categorized as "tradesman" included 1 plumber, 1 electrician, 1 sheet metal worker, 1 carpenter and 1 painter.





Table IV outlining the marital status of the group according to age range, shows a near-equal distribution of married<sup>1</sup> and single subjects; 52.5% of the group were married, while 47.5% remained single. The majority of offenders under 25 years of age were single, while the majority beyond 30 years were married, not unlike standards for the general population.

Table V

Offences Committed by the Experimental Group (N= 40)

<u>Charge</u>	<u>No.</u>	<u>Percentage</u>
<b>Sex Offences:</b>		
Indecent Act.....	7	17.5
Gross Indecency.....	2	5.0
Indecent Assault.....	1	2.5
Contributing.....	<u>3</u>	<u>7.5</u>
Total.....	13	32.5
<b>Offences with Personal Violence:</b>		
Threatening.....	2	5.0
Assault.....	2	5.0
Shooting with Intent.....	1	2.5
Wounding.....	1	2.5
Manslaughter.....	1	2.5
Murder.....	1	2.5
Attempted suicide.....	<u>3</u>	<u>7.5</u>
Total.....	11	27.5
<b>Property Offences:</b>		
False Pretences.....	4	10.0
Theft.....	4	10.0
Illegal Possession of Liquor.....	<u>1</u>	<u>2.5</u>
Total.....	9	22.5
<b>Miscellaneous Offences:</b>		
Non-support.....	1	2.5
Causing Disturbance.....	3	7.5
Public Mischief.....	1	2.5
Intoxication.....	1	2.5
Dangerous Driving.....	<u>1</u>	<u>2.5</u>
Total.....	7	17.5
Gross Total.....	40	100.0

1. Of the 21 married subjects, 1 was separated.



In table V, the types of offences committed by the experimental group are listed and categorized in order of frequency. The greatest percentage of offences committed were sexual offences (32.5%). The next greatest frequencies were for offences with personal violence (27.5%), property offences (22.5%), and miscellaneous offences not fitting into any single broad category (17.0%). The observation that about one third of the group were found guilty of sexual offences may be attributed largely to the fact that individuals accused of this type of offence are more likely to be remanded for mental observation than for other types of offences.

Table VI

Sentences Imposed for Offences of Experimental Group (N= 40)

<u>Sentence</u>	<u>No.</u>	<u>Percentage</u>
15 days or less.....	5	12.5
30 days.....	6	15.0
2 months.....	2	5.0
3 months.....	4	10.0
6 months.....	2	5.0
9 months.....	1	2.5
12 months.....	3	7.5
12 months suspended.....	8	20.0
18 months.....	1	2.5
18 months suspended.....	1	2.5
2 years less a day.....	1	2.5
2 years.....	2	5.0
2 years suspended.....	1	2.5
3 years.....	2	5.0
Life imprisonment.....	1	2.5
Total.....	40	100.0

Mean length of sentence..... 10 months.

(Individuals sentenced 3 months or less were given the option of paying a fine plus costs)



Table VI shows the percentage of the experimental group receiving various lengths of sentences, ranging from "one day from arrest" to "life imprisonment"<sup>1</sup>. Excluding the sentence to life imprisonment, the average length of sentence was 10 months. 10% of the group received sentences amounting to 2 years or more; 67.5% of the group received sentences under 2 years; while 22.5% received suspended sentences. The sentences may be considered generally "mild" as compared to prison sentences<sup>2</sup> due to the fact that an inestimable majority of the group were first offenders and, as such, received relatively unsevere punishment.

A further point of interest in describing the experimental group would have been in correlating the type of offence with the length of sentence imposed. In view of the fact that wide variations in length of sentence were imposed upon all categories of offenders, this was considered not expedient in the present study.

#### Selection of the Normal Control Groups

In testing the first hypothesis, that the test performance of mentally competent offenders should differ from that of a normal population, two normal control groups were selected from Rapaport's Control Group. (46) The Total Patrol Group consisting of 54 randomly chosen members of the Kansas Highway Patrol, as well as its component, the Well-Adjusted Patrol group of 32 patrolmen, were used as normal control groups for comparison with the experimental group.

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1. In Appendix B, an account is given of the type of offence and length of sentence imposed upon each offender in the experimental group.
  2. In Canada, offenders receiving sentences of 2 years or more are committed to a Federal Penitentiary; those receiving sentences under 2 years are committed to a Provincial Goal.





The Total Patrol Group contained, in addition to 32 well-adjusted normals, 17 borderline-adjusted and 5 maladjusted normals who "showed a history of instability, childhood difficulties, neurotic symptoms whether physical or subjective, extreme swings of mood, much impulsiveness, or strong withdrawal tendencies..." (46).

The Well-Adjusted Patrol Group comprised of individuals "who, despite occasional difficulty, anxiety or mood swings, were nevertheless well-contained individuals who did their work satisfactorily, made a favorable impression in their social contacts, and revealed a history neither indicative of pathology nor behavior in the course of examination indicative of maladjustment..." (46).

Classification of each case was derived from a one-hour interview with both a psychiatrist and a social worker, as well as discussion with the Chief of the Highway Patrol concerning each. Adjustment ratings were based on the degree of anxiety, depressive mood, schizoid trends, inhibition and impulsive characteristics shown by each case. However, despite the varying degrees of adjustment shown, all were considered within the "normal" range, and comprising a "relatively homogeneous population".

Rapaport's Control Group was used in this study, not only because it has been used frequently for comparative purposes (27, 38, 45), but also the variables of age, sex, and race correspond to those of the experimental group. However, the main controlled variable with which this study is concerned is



that of "mental competence" characterizing both the experimental group and the normal groups. The main independent variable was assumed to be social adjustment, or, "social competence", which was poor for the experimental group of offenders and satisfactory for the normal control groups.

#### Selection of an Offenders' Control Group

Testing the third hypothesis, that the test performance of mentally competent offenders differs from that of other offenders, and therefore is not characteristic of offenders in general, required selection of an offenders' control group. For this purpose, Gurvitz's study of psychopaths resident in a penitentiary (17, 18) was employed.<sup>1</sup> Since Gurvitz found no significant difference between his experimental group of psychopathic prisoners and his prison control group, it was not considered necessary to use both prison populations for comparison. Therefore, the group of psychopathic prisoners was used as an offenders' control group on the basis of that author's findings that it did not differ from the other prisoners in the same penitentiary and it represented a different type of offender than the experimental group.<sup>2</sup> This group was also selected for comparison in

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1. A more detailed account of Gurvitz's investigation may be found in Chapter II, pp. 20.
  2. Gurvitz's prison control group had been diagnosed: "without mental disease as the result of a detailed case history and clinical interview, and who manifested stable behavior during the entire period of their incarceration." (17, 18) It would appear, therefore, that Gurvitz's prison control group was not unlike the experimental group of offenders who had been clinically evaluated as "mentally competent".



order to reflect possible adult psychopathic traits suspected in mentally competent offenders, since it would appear that other recorded studies on psychopaths have dealt with adolescents (13, 29, 31, 55).

Gurvitz's group was selected in preference to the prison groups studied by Altus and Clark (2) and by Clark and Moore (10) since Gurvitz's selection variables were more comparable to those used in the present study. As it has been stated earlier in this study<sup>1</sup>, the experimental subjects in the investigation of Altus and Clark were Borderline Defective in intelligence, while the subjects of Clark and Moore were clinically diagnosed into three categories of personality maladjustment. Both groups therefore presented clinical problems which may possibly have precipitated their legal difficulties. Gurvitz's psychopathic prison group, on the other hand, was more clearly classified as an offenders' group presenting social (legal) problems rather than clinical problems since psychopathy usually has been defined as a "social disorder"<sup>2</sup>.

Gurvitz's group of prisoners resident in a penitentiary consisted of 84 male, white, adult prisoners who had been administered the Full Scale of the Wechsler-Bellevue Intelligence

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1. The recorded studies by Altus and Clark (2) and by Clark and Moore (10) are outlined in Chapter II, pp. 22 and 23.
2. Lindner (31) states, "Psychopathic personality is a social disorder, its various signs and symptoms acting to unsuit the individual for ordinary life among other members of the community. Such signs usually resolve to a constellation of personal qualities which reflect the opposite of the characteristics in demand by the culture."





Scale excluding the Vocabulary subtest. The age range was established from 19 to 35 "since it is between these ages that the clinical picture of psychopathy reaches its sharpest focus and greatest incidence" (17, 18). The range of I.Q. was from 80 to 119 "since above and below these limits the method of weighting the subtests and determining the I.Q. allows too great a possibility for both chance and systematic error" (17, 18). Each of the 84 cases had been clinically diagnosed "psychopathic personality" meeting the criteria of Lindner,<sup>1</sup> and this diagnosis was sustained for one year.

It is pertinent to this study that while "mental competence" may be implied as a criterion for psychopaths, it is not directly stated as an aspect of their social incompetence. Gurvitz's group, selected as an offenders' control group, differs from the experimental group in that it was not selected on the basis of mental competence but rather for psychopathy; the experimental group was selected primarily for clinically ascertained mental competence.

In comparing Gurvitz's group with the experimental group, the main controlled variable is considered to be "social incompetence", since both groups consisting of offenders revealed severe social disorders warranting punishment by the law. For the

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1. Lindner's definition of "psychopathic personality" is given on p. 35, Footnote 2.

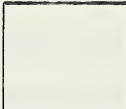
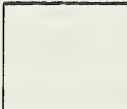






purpose of this study, the main independent variable is considered to be "mental competence" for which the experimental group of offenders but not the control group of offenders was clinically screened.

To summarize and simplify description of the experimental and control groups utilized in this investigation, the main variable characterizing each group are illustrated in Figure 1

Figure 1

Mental and Social Competence  
as Represented in  
The Experimental and Control Groups

	Normal Control Groups		Experi- mental Group		Offenders' Control Group
Mental Competence				Independent Variable	
Social Competence		Independent Variable			

Hypothesis:

1.

2.

3.

Competence:



Incompetence:

The normal control groups, Rapaport's Total Patrol Group and Well-Adjusted Patrol Group were rated as both mentally and socially competent. The experimental group was found by clinical examina-



tion to be mentally competent but socially incompetent in that it was comprised of offenders. On this basis the offenders' control group, Gurvitz's psychopathic population resident in a penitentiary, was also considered to be socially incompetent, but not necessarily mentally competent since selection had not been made for this variable.

Therefore, in testing the first hypothesis, that the test performance of mentally competent offenders differs from that of a normal population, the controlled variable is "mental competence" characterizing the normal groups, and the experimental group with which they were compared. The independent variable in this comparison was "social competence" found only in the normal groups.

In testing the second hypothesis, that there is a psychometric pattern for this type of offender, the test performance of the experimental group alone was analyzed. On the basis of Rapaport's contention (45) that the test performance of a well-adjusted person, assumed to be mentally competent, should show a minimum amount of scatter, it was assumed that any scatter obtained for the experimental group would be indicative of social maladjustment and therefore reflect social incompetence.

Testing the third hypothesis, that the test performance of mentally competent offenders differs from that of other types of offenders, and therefore from offenders in general, revealed that the controlled variable was "social incompetence" characterizing both the experimental group and the control group of offenders. The independent variable in comparing these groups was considered to be "mental competence" for which only the experimental group had





been clinically screened.

### Statistical Procedure

The three hypotheses of this study were tested by means of the critical ratio.<sup>1</sup> Using this technique, the normal control groups, Rapaport's Total Patrol Group and Well-Adjusted Patrol Group were compared with the experimental group, the presence of vocabulary scatter for the experimental group determined, and the offenders' control group, Gurvitz's psychopathic prison group, compared with the experimental group.<sup>2</sup>

For interest, vocabulary scatter was also evaluated for Rapaport's groups by means of the critical ratio, since this had not been completely recorded in the account of Rapaport's study (45). Vocabulary scatter could not be evaluated for Gurvitz's group as it was for Rapaport's groups since the Vocabulary subtest had not been employed in that author's investigation. Although determining scatter for the control groups was not a necessary aspect of this study, it was felt that it would have permitted interesting comparisons.

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1. The formula used for arriving at the critical ratio is taken from Townsend (54) as revised and presented by Dr. D.E. Smith of the Department of Psychology at the University of Alberta.

$$t = \frac{M_1 - M_2}{\sqrt{\left( \frac{N_1 \sigma_1^2 + N_2 \sigma_2^2}{N_1 + N_2 - 2} \right) \left( \frac{N_1 + N_2}{N_1 N_2} \right)}}$$

2. The 5% level of confidence is considered significant; the 2% level of confidence more significant; and the 1% level of confidence, very significant.



## Chapter IV

### RESULTS

The discussion of results will be divided into three parts following the three hypotheses of this investigation. Accordingly, Part I will give an evaluation of the validity of the first hypothesis, that the Wechsler performance of mentally competent offenders differs significantly from that of a normal population. Since two normal control groups were used in testing this hypothesis, significant differences between them and the experimental group will be examined and discussed. Differences between the two normal groups will also be considered as well as the presence of vocabulary scatter for each.

Part II will be an attempt to establish the validity of the second hypothesis, that a scatter pattern does exist on the Wechsler-Bellevue scale for mentally competent offenders. The presence of vocabulary scatter for the various subtest scores where it was found will be outlined. In addition, the rationale of subtests showing scatter as related to the variables of this study will be discussed, as well as the question of psychopathy in the group.

Part III will be an evaluation of the third hypothesis, that the test performance of mentally competent offenders differs significantly from that of other offenders. Since the offenders' control group selected for this comparison was Gurvitz's psychopathic prison population, significant differences between it and the experimental group will be discussed. Due to the fact that



Gurvitz did not employ the Vocabulary subtest in his study, Vocabulary scatter cannot be calculated for his group as it was for Rapaport's groups. Although establishing vocabulary scatter was not necessary for the control groups, it was felt that this would permit interesting comparisons in view of the fact that vocabulary scatter was used for the experimental group.

### Part I

#### Comparison of Rapaport's Total Patrol Group (N= 54) and Well-Adjusted Group (N= 32) with the Experimental Group (N= 40)

In comparing the two normal control groups, Rapaport's Total Patrol Group and Well-Adjusted Patrol Group, with the experimental group, differences from these two normal groups were found to be equivalent. An examination of the statistical results obtained for the normal groups reveals highly similar mean I.Q.'s and subtest scores, as well as near-equal scatter. Therefore, for expediency, comparison of Rapaport's groups with the experimental group will be considered together. However, before proceeding with a discussion of the results obtained in this comparison, the striking equality of the normal control groups should first be pointed out.

Table VII, purported to indicate any significant differences, by means of the critical ratio, between the Total Patrol Group and the Well-Adjusted Group, also shows the mean I.Q.'s, subtest scores, standard deviations and critical ratios from Vocabulary for each group. It may be noted that the I.Q.'s on all three scales for both groups were on the Bright Normal level, ranging from 114 to 118. There were no significant differences







Table VII

Critical Ratio's for Rapaport's Total Patrol Group (N= 54) and Well-Adjusted Patrol Group (N= 32)

Subtest	TOTAL PATROL GROUP			WELL-ADJUSTED GROUP			DIFFERENCE	
	Mean	SD	CR from Voc.	Mean	SD	CR from Voc.	(Tot. - Adj.)	CR (Tot. - Adj.)
Info.....	12.56	1.98	.77	13.03	1.83	.79	.47	1.10
Comp.....	12.46	1.79	.54	12.72	1.75	.07	.26	.64
D. Span.....	10.83	3.34	2.80x	10.72	3.03	3.19x	.11	.16
Arith.....	11.31	2.71	2.18xxx	11.53	2.60	2.11xx	.22	.36
Sim.....	11.98	2.01	.81	12.44	1.84	.57	.46	1.04
Voc.....	12.28	1.74		12.69	1.61		.41	1.07
P.A.....	10.39	2.81	4.16x	10.66	2.85	3.46x	.27	.42
P.C.....	11.30	2.21	2.54xx	11.72	2.15	2.00xxx	.42	.86
B.D.....	11.61	2.31	1.68	11.84	2.00	1.83	.23	.47
O.A.....	10.67	2.43	3.93x	11.13	2.69	2.77x	.46	.80
D.Sym.....	11.41	1.91	2.46xx	11.31	2.00	2.98x	.10	.22

Full Scale IQ: 115.94 8.19

Verbal IQ: 115.37 8.88

Performance IQ: 114.15 9.81

x At the .01 or 1% level of confidence  
 xx At the .02 or 2% level of confidence  
 xxx At the .05 or 5% level of confidence



between respective subtest scores for the two groups. Near-identical vocabulary scatter was obtained for both, with slight variation shown only in the level of confidence for Arithmetic, Picture Completion and Digit Symbol.

Vocabulary Scatter occurs in a negative direction for both normal groups on Digit Span, Arithmetic, Picture Arrangement, Picture Completion, Object Assembly and Digit Symbol. The relatively high mean Vocabulary scores, exceeded only by Information and Comprehension would seem indicative of a comparable cultural level according to contentions of Wechsler (56-c) and Rapaport (46). This observation also seems to indicate that vocabulary scatter is an appropriate measure for these particular normal groups since, being high, they would appear to represent the intellectual potentials of the groups as generally accepted in the literature (20, 30, 45, 56-b). The mean subtest scores and the mean deviations from Vocabulary are shown graphically in Figures 2 and 3 respectively at the end of this chapter<sup>1</sup>.

Table X<sup>2</sup>, showing the average amount of Vocabulary scatter on the Verbal Scale, Performance Scale and Full Scale, indicates that, on all three scales, the Well-Adjusted group revealed greater scatter than did the Total group. In passing, this observation is interesting in that it does not support the assumption emphasized by Rapaport (45) that less scatter would be expected to occur for better adjusted individuals.

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1. Pp. 61 and 62 respectively.

2. P. 49



Since Rapaport's normal groups are highly similar in all respects, differences from the experimental group will be treated simultaneously for both groups. Tables VIII<sup>1</sup> and IX<sup>2</sup>, showing the significances of differences of subtest scores in critical ratios for the Total Patrol Group and the Well-Adjusted Patrol Group, indicate equivalent differences. While Rapaport's groups maintained a Bright Normal intellectual level of efficiency, the experimental group was Average on all three scales. This discrepancy in intellectual levels largely explains the differences significant at the 1% level of confidence, in favor of the normal groups for six of the eleven subtests - Information, Digit Span, Arithmetic, Similarities, Vocabulary and Digit Symbol. While no significant difference for Picture Completion exists between the Total Patrol Group and the experimental group, there is a difference at the 5% level of confidence for this subtest in comparing the Well-Adjusted group with the experimental group.

As indicated in Table X<sup>3</sup>, the average amount of vocabulary scatter for Rapaport's groups exceeded that obtained for the experimental group on the Full Scale and Performance Scale. The normal groups, therefore, showed more irregular functioning and development of abilities tested on these scales, contrary to Rapaport's assumption (45) that, in normal individuals, scatter should be relatively even. In this respect, the performance

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1. Page 47.
2. Page 48.
3. Page 49.





abilities of mentally competent offenders show more equal development than in normals. At the same time, the mean vocabulary scatter on the Verbal scale was greater for the experimental group than for the normal groups. Supporting Rapaport's assumption (45), the abilities tapped in the Verbal Scale are less evenly developed in mentally competent offenders than in normals.

Thus it appears that the verbal abilities of the experimental group show less even development and functioning than in normals whose scatter on the Verbal Scale was more even. On the other hand, the performance abilities of the experimental group appear to function at a more nearly equal level of development than in normals. Rapaport's assumption is supported on the one hand and negated on the other.

Since the normal groups and the experimental group were all considered "mentally competent", the normal groups only rated as "socially competent", the question may be raised as to whether differences between the groups may be attributed to the independent variable of "social competence". However, there was another variable in this comparison, that of intellectual level, which, had it been controlled, might have allowed this deduction. Due to the significant discrepancy in level of intelligence between the normal control and experimental groups, the differences in mean subtest scores and the differences in scatter patterns cannot be explained by the single independent variable of "social competence". The differences in mean subtest scores in favor of the normal groups may as reasonably be explained in the relatively higher intellectual levels for these groups. It is



therefore suggested that the first hypothesis be retested in the future, controlling the variable of intelligence so that it will be more comparable between the control and experimental groups.

The differences in vocabulary scatter are directly attributable to the statistical finding that the Vocabulary level was relatively high for the normal control groups and low for the experimental group. To reiterate, it may be observed in Tables VIII and IX that there is significant vocabulary scatter in a positive direction for the normal groups on the six subtests - Digit Span, Arithmetic, Picture Arrangement, Picture Completion, Object Assembly and Digit Symbol. The experimental group on the other hand shows vocabulary scatter for the three subtests - Comprehension and Object Assembly in a positive direction, and Digit Span in a negative direction. The differences in Vocabulary level are interesting when related to the independent variable of "social competence". It may be suggested that a low Vocabulary level is one aspect of social incompetence as revealed in the experimental group, to be discussed in Part II of this chapter.



Table VIII

Critical Ratio's for Rapaport's Total Patrol Group (N= 54) and the Experimental Group (N= 40)

Subtest	TOTAL PATROL GROUP				EXPERIMENTAL GROUP				DIFFERENCE	
	Mean	SD	CR from Voc.		Mean	SD	CR from Voc.		(Rap. - Exp.)	CR (Rap. - Exp.)
Info.....	12.56	1.98	.77		10.05	3.10	.23		2.51	4.72x
Comp.....	12.46	1.79	.54		11.83	2.81	3.06x		.64	1.33
D. Span.....	10.83	3.34	2.80x		8.18	3.46	2.43xx		2.66	3.72x
Arith.....	11.31	2.71	2.18xxx		9.05	4.68	.98		2.26	2.92x
Sim.....	11.98	2.01	.81		9.78	3.42	.18		2.21	3.87x
Voc.....	12.28	1.74			9.90	2.75			2.38	5.07x
P.A.....	10.39	2.81	4.16x		9.98	3.16	.11		.41	.66
P.C.....	11.30	2.21	2.54xx		10.60	2.45	1.19		.70	1.43
B.D.....	11.61	2.31	1.68		10.88	2.85	1.54		.74	1.37
O.A.....	10.67	2.43	3.93x		11.18	1.50	2.54xx		.51	1.16
D. Sym.....	11.41	1.91	2.46xx		9.00	2.60	1.49		2.41	5.12x
Full Scale IQ:.	115.94	8.19			104.55	13.89				
Verbal IQ:.....	115.37	8.88			102.75	15.62				
Performance IQ:	114.15	9.81			106.25	11.62				

x At the .01 or 1% level of confidence

xx At the .02 or 2% level of confidence

xxx At the .05 or 5% level of confidence





Table IX

Critical Ratio's for Repaport's Well-Adjusted Group (N= 32) and the Experimental Group (N= 40)

Subtest	WELL-ADJUSTED GROUP			EXPERIMENTAL GROUP			DIFFERENCE	
	Mean	SD	CR from Voc.	Mean	SD	CR from Voc.	(Rep. - Exp.)	CR (Rep. - Exp.)
Info.....	13.03	1.83	.79	10.05	3.10	.23	2.98	4.75x
Comp.....	12.72	1.75	.07	11.83	2.81	3.06x	.89	1.55
D. Span.....	10.72	3.03	3.19x	8.18	3.46	2.43xx	2.54	3.22x
Arith.....	11.53	2.60	2.11xx	9.05	4.68	.98	2.48	2.65x
Sim.....	12.44	1.84	.57	9.78	3.42	.18	2.66	3.91x
Voc.....	12.69	1.61		9.90	2.75		2.79	5.01x
P.A.....	10.66	2.85	3.46x	9.98	3.16	.11	.68	. 94
P.C.....	11.72	2.15	2.00xxx	10.60	2.45	1.19	1.12	2.00xxx
B.D.....	11.84	2.00	1.83	10.88	2.85	1.54	.97	1.61
O.A.....	11.13	2.69	2.77x	11.18	1.50	2.54xx	.05	.10
D. Sym.....	11.31	2.00	2.98x	9.00	2.60	1.49	2.31	4.08x
Full Scale IQ:	118.31	7.22		104.55	13.89			
Verbal IQ:	117.03	7.44		102.75	15.62			
Performance IQ:	117.00	7.55		106.25	11.62			

x At the .01 or 1% level of confidence

xx At the .02 or 2% level of confidence

xxx At the .05 or 5% level of confidence



Table X

Deviations of Subtest Scores from Vocabulary  
for Rapaport's Total Patrol Group (N= 54)  
Rapaport's Well-Adjusted Patrol Group (N= 32)  
and the Experimental Group (N= 40)

<u>Subtest:</u>	<u>TOTAL PATROL GROUP</u>	<u>WELL-ADJUSTED GROUP</u>	<u>EXPERIMENTAL GROUP</u>
Info.....	.28	.34	.15
Comp.....	.19	-.03	1.93
D. Span.....	-1.44	-1.97	-1.73
Arith.....	-.96	-1.16	-.85
Sim.....	-.30	-.25	-.13
P.A.....	-1.89	-2.03	.08
P.C.....	-.98	-.97	.70
B.D.....	-.67	-.84	.98
O.A.....	-1.61	-1.56	1.28
D.Sym.....	-.87	-1.38	-.90
Total Deviation:			
Full Scale.....	9.19	10.53	8.73
Verbal Scale...	3.17	3.75	4.79
Perf. Scale....	6.02	6.78	3.94
Mean Deviation:			
Full Scale....	.92	1.05	.87
Verbal Scale...	.63	.75	.96
Perf. Scale....	1.20	1.36	.79

# 1910

The following is a list of the names of the persons who have been elected to the office of Mayor of the City of New York for the year 1910. The names are arranged in alphabetical order.

Name	Address	Occupation	Remarks
J. A. ...	...	...	...
J. B. ...	...	...	...
J. C. ...	...	...	...
J. D. ...	...	...	...
J. E. ...	...	...	...
J. F. ...	...	...	...
J. G. ...	...	...	...
J. H. ...	...	...	...
J. I. ...	...	...	...
J. J. ...	...	...	...
J. K. ...	...	...	...
J. L. ...	...	...	...
J. M. ...	...	...	...
J. N. ...	...	...	...
J. O. ...	...	...	...
J. P. ...	...	...	...
J. Q. ...	...	...	...
J. R. ...	...	...	...
J. S. ...	...	...	...
J. T. ...	...	...	...
J. U. ...	...	...	...
J. V. ...	...	...	...

## Part II

### Experimental Group (N= 40)

Statistical findings for the experimental group have been included in Tables VIII, IX and X<sup>1</sup> in Part I of this chapter. The data were included in the previous section for complete comparison with the normal control groups. To avoid repetition, reference is again made to these tables in discussing the results obtained in testing the second hypothesis.

In Tables VIII and IX, it is indicated that the experimental group had mean I.Q.'s of 105, 103 and 106 on the Full Scale, Verbal Scale and Performance Scale respectively. The lowest standard deviation for quotients occurs with the highest mean I.Q. on the Performance Scale, indicating that the group tended to score consistently highest on this scale. The greatest standard deviation occurs with the lowest mean I.Q. on the Verbal Scale, suggesting a greater spread of Verbal quotients which were generally lower than Performance quotients. There was little discrepancy among the three quotients, each slightly above the mean I.Q. of 100 obtained by Wechsler (56-c) for his standardizing population, so that the experimental group was considered an Average group in intelligence.

Standard deviations for the Verbal subtests are generally higher than those for the Performance subtests, indicating a greater

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1. Tables VIII, IX and X are on pp. 47, 48 and 49 respectively.





dispersion of scores for subtests in the Verbal Scale. This observation corresponds to the relatively high standard deviation for the Verbal I.Q., and low standard deviation for the Performance I.Q. It also compares to the findings outlined in Table X, column 3, that the mean vocabulary scatter on the Verbal Scale, .96, was greater than on the Performance Scale, .79. The mean subtest scores of the Performance Scale clustered more closely about the Vocabulary mean of 9.90 than did the mean subtest scores of the Verbal Scale, and subjects tended to score consistently better on the Performance Scale.

The highest standard deviation for the Full Scale occurs on Arithmetic, revealing widest variation in performance on this subtest. The lowest standard deviation occurs on Object Assembly, suggesting that the level of performance which was high on this subtest was also consistent among individuals in the group.

The comparatively low Vocabulary mean would seem indicative of a low cultural level in the group, not in keeping with the intellectual capacity as revealed by higher mean scores for six of the other ten subtests - Information, Comprehension, Picture Arrangement, Picture Completion, Block Design and Object Assembly. These findings do not support the generally upheld contention that vocabulary level is a fair estimate of intelligence (30, 45, 52). Rather, the admission by Jastak and Gordon (25) and by Wechsler (56-c) is upheld in this study: that vocabulary level is not a fair estimate of intelligence in non-verbal subjects, of which the experimental group would appear to consist by its test performance. Therefore, the empirical basis for using the measure of vocabulary



scatter for the experimental group may not be warranted in this respect.

Vocabulary scatter is significant for the experimental group at the 1% level of confidence in a positive direction for Comprehension. It is significant at the 2% level of confidence in a negative direction for Digit Span, and at the 2% level of confidence in a positive direction for object Assembly. Scatter for the experimental group is illustrated graphically in Figure 3<sup>1</sup>. The significant deviations of these subtests from Vocabulary tend to confirm the first hypothesis, that there is a scatter pattern for the experimental group on the Wechsler-Bellevue Intelligence Scale.

The vocabulary scatter pattern determined for the experimental group is interesting in view of the fact that the group was rated "mentally competent" but "socially incompetent". Since "mental competence", as "normal" (45) may be assumed to theoretically reflect near-equal subtest score deviations, it may be argued that scatter obtained for the group could be the result of "social incompetence". As stated in Part I of this chapter<sup>2</sup>, this pattern is directly related to the Vocabulary level which was low, and may be a factor in the unsatisfactory social adjustment of the experimental group. In addition to the low cultural background reflected in the Vocabulary level, it is felt that the rationale of the subtests, Comprehension, Digit Span and Object Assembly, showing scatter might further explain the poor social adjustment of mentally

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1. Figure 3, Page 62.

2. Page 46.



competent offenders.

### Rationale of Subtests Showing Vocabulary Scatter

Comprehension showing the greatest positive vocabulary scatter in the group is generally regarded as a test of common sense and judgment in practical situations according to Wechsler (56-c) and Rapaport (45). It is interesting that, while the highest mean score in Comprehension would tend to suggest good judgment and ability to evaluate past experience, the experimental group of offenders seemed unable to profit from this ability.

Digit Span showing the greatest negative scatter for the group is, according to Rapaport (45), considered a test of re-tentativeness, reflecting attention defects and anxiety impairment where performance is poor. According to this criterion, the experimental group displays anxiety. It is possible that the anxiety impairment in performance by the group may have been of a chronic nature, or that it may have been intensified by the test situation which could have presented a personal challenge to individuals remanded for mental observation.

Object Assembly showing positive vocabulary scatter, has been segregated by Wechsler (56-c) as a test of visual-motor co-ordination. Rapaport (45) considered it a test of ability to differentiate familiar and social-sexual situations. Schafer (47) states that it may help distinguish the "action-oriented" individual. The significantly high mean score obtained for this subtest, next highest to Comprehension, may well reflect a group "geared for action" in performance situations according to these criteria.







Judging from the rationale of the subtests showing vocabulary scatter, the mentally competent offenders of the experimental group would seem to have been unable to profit from relatively good ability to evaluate everyday situations. This may have been a result of anxiety displayed in the group which would seem to have been further manifested in a poorly controlled readiness for action in practical and social settings. While these traits revealed in scatter did not appear to impair mental competence for which the subjects were clinically examined, they would seem to be significant factors leading to their maladjustment and incompetence in social situations.

#### Alleged Psychopathic Features Revealed in Scatter

A further point for discussion in this section is that of "psychopathy" in the experimental group. Wechsler (56-c) and Levi (29) proposed that marked superiority of the Performance Scale over the Verbal Scale may be indicative of this syndrome in adolescent males. However, this discrepancy in the experimental group is not significant. While Wechsler (56-c) and Schafer (47) contend that a frequently high score in Picture Arrangement may also be a sign of psychopathy, the mean score for this subtest as performed by the experimental group was relatively low. As a test of visual-motor speed in "action-oriented" individuals, according to Schafer, the high Object Assembly score may be considered an indicator of psychopathy. However, according to Levi's ratio as applied to group findings, psychopathy is counter-indicated.<sup>1</sup> Furthermore, a high

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1. P.A. / O.A. : P.C. / B.D. = 21.96 : 21.48 for the experimental group. Levi's formula for psychopathy (29) is outlined on page 19.



Comprehension score as that obtained by the group is not accounted for in the literature as a sign of this syndrome. Thus it appears that the recognized Wechsler signs for psychopathy in adolescent males are not entirely demonstrated in the test performance of the experimental group of mentally competent adult male offenders.

It may be that Gurvitz (17, 18) is justified in regarding Wechsler signs for psychopathy in adolescents as not applicable to adults, since none was strongly evidenced by the experimental group. However, if the offenders of the experimental group may be considered "psychopathic" according to the law on the basis of their legal difficulties and unsatisfactory social adjustment, then Gurvitz's contention that there is no characteristic test pattern for psychopaths is not upheld by this investigation.

The psychometric pattern for the experimental group of mentally competent offenders is not regarded as indicative of psychopathy. Rather, it is considered indicative of social maladjustment in the broadest sense, whether it be classified as "inadequate", "asocial", "antisocial", "deviant" or even "psychopathic"<sup>1</sup>. The vocabulary scatter pattern for the experimental group of offenders would seem to portray a general "social incompetence". A more refined categorization of mentally competent offenders would possibly reveal different scatter patterns according to the type of offences committed. It is suggested that research could be carried out in this field in an attempt to establish more specific scatter reflecting particular characteristics of the various types of mentally competent offenders.

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1. These various types of "pathological personality" are defined on pp. 3 - 4.



### Part III

#### Comparison of Gurvitz's Psychopathic Prison Group (N= 84) with the Experimental Group (N= 40)

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Discussion of results obtained in testing the third hypothesis, which necessitated comparison between an offenders' control group and the experimental group, introduces some inconsistency into this chapter. Complete comparison was not possible since the offenders' control group, Gurvitz's psychopathic prison population, had not been administered the Vocabulary subtest. As a result of this, neither was it possible to establish a vocabulary scatter pattern for this group, as it was for the normal control groups in Part I, in order to permit an interesting rather than necessary comparison with the experimental group. Therefore, this section will be concerned with the comparison made between Gurvitz's group and the experimental group for all subtests excepting Vocabulary. In Table XI, significant differences as seen in the critical ratio, between Gurvitz's group and the experimental group are outlined, while in Figure 2<sup>1</sup>, the mean subtest scores are shown graphically.

In Gurvitz's group, the mean I.Q.'s for the Full Scale, Verbal Scale and Performance Scale were each approximately 100, slightly lower than those obtained for the experimental group, but almost identical to those obtained by Wechsler (56-c) for his standardizing population. This may be explained in Gurvitz's method of

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Table XI

Critical Ratio's for Gurvitz's Psychopathic Prison Group (N- 84) and the Experimental Group (N- 40)

Subtest	GURVITZ'S GROUP		EXPERIMENTAL GROUP		DIFFERENCE		CR ( $\frac{\text{Gur.} - \text{Exp.}}{\text{Exp.}}$ )
	Mean	SD	Mean	SD	( $\frac{\text{Gur.} - \text{Exp.}}{\text{Exp.}}$ )		
Info.....	9.94	2.96	10.05	3.10	.11		.19
Comp.....	9.99	2.62	11.83	2.81	1.84		3.53x
D. Span.....	8.56	2.96	8.18	3.46	.39		.63
Arith.....	8.85	3.02	9.05	4.68	.20		.28
Sim.....	9.20	2.91	9.78	3.42	.58		.96
Voc.....			9.90	2.75			
P.A.....	9.43	2.57	9.98	3.16	.55		1.00
P.C.....	10.13	2.64	10.60	2.45	.47		.96
B.D.....	9.99	2.71	10.88	2.85	.89		1.66
O.A.....	10.12	3.01	11.18	1.50	1.06		2.08xxx
D. Sym.....	9.19	2.43	9.00	2.60	.19		.39
Full Scale IQ:	99.52	10.88	104.55	13.89			
Verbal IQ:	99.79	13.32	102.75	15.62			
Performance IQ:	99.36	12.56	106.25	11.62			

x at the .01 or 1% level of confidence

xx at the .02 or 2% level of confidence

xxx at the .05 or 5% level of confidence



selection, according to which the I.Q.'s of his group ranged from 80 to 119, thereby eliminating extreme score variables which could weight the mean scores. In Rapaport's normal groups and in the experimental group, only the extremely "low" variables were eliminated, thereby explaining the higher mean scores for these groups.

In both Gurvitz's group and the experimental group, the standard deviation for the Verbal I.Q. was greater than that for the Performance I.Q., suggesting less variation in Performance level for these groups. The standard deviations for all subtest scores, excepting Picture Arrangement and Object Assembly were less for Gurvitz's group than for the experimental group, indicating that performance on all but these two subtests would appear to have been more consistent in the psychopathic prisoners.

The mean scores for all subtests excepting Digit Span and Digit Symbol were higher for the experimental group than for Gurvitz's group. In comparing subtest scores by the critical ratio, it was found that the groups differed significantly on Comprehension at the 1% level of confidence, and, on Object Assembly, at the 5% level of confidence in a positive direction for the experimental group. This significant difference between Gurvitz's group and the experimental group on Comprehension and Object Assembly tends to verify the third hypothesis, that the test performance of mentally competent offenders differs from that of psychopathic prisoners, another type of offender.

Gurvitz reports in his findings that the test performance of psychopathic prisoners was not significantly different from that of his prison control group. Therefore, it may be



reasoned that a comparison between that author's prison control group and the experimental group would have produced near identical results to those of the present comparison. Gurvitz also found that his psychopathic prison group did not differ from Wechsler's standardizing population in test performance, so that the experimental group would also appear to differ from an Average population in test performance.

Since the experimental group was found to differ from Gurvitz's psychopathic prison group which was comparable in test performance to his prison control group, it is reasonable to suppose that the experimental group would differ from still other groups of offenders and from offenders in general. As it has been stated earlier <sup>1</sup>, groups of general offenders are not to be considered necessarily mentally competent since they may contain individuals showing personality maladjustment warranting clinical attention. These deviations in personality adjustment would likely be reflected in scatter different to that of mentally competent offenders.

The difference in test performance between Gurvitz's group and the experimental group is interesting in view of the controlled variable of "social incompetence", and the uncontrolled variable of "mental competence" assigned only to the experimental group in this comparison. Since both groups consisting of offenders had been proven socially incompetent by the law, the

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differences in test performance would not seem attributed to this variable. Neither would the differences in selection variables of age and I.Q. range appear significant enough to justify these differences. It would appear that the uncontrolled variable of "mental competence" may have influenced this discrepancy. Thus it is a tenet of this study that the test performance of mentally competent offenders differs from that of other offenders, and therefore from offenders in general, on the basis of "mental competence".



INFO.

COMP.

D. SPAN

ARITH.

SIM.

VOC.

P.A.

P.C.

B.D.

O.A.

D. SYM.

Key

Rapaport's:

— — — — — Total Patrol Group

- - - - - Well-Adjusted  
Patrol Group

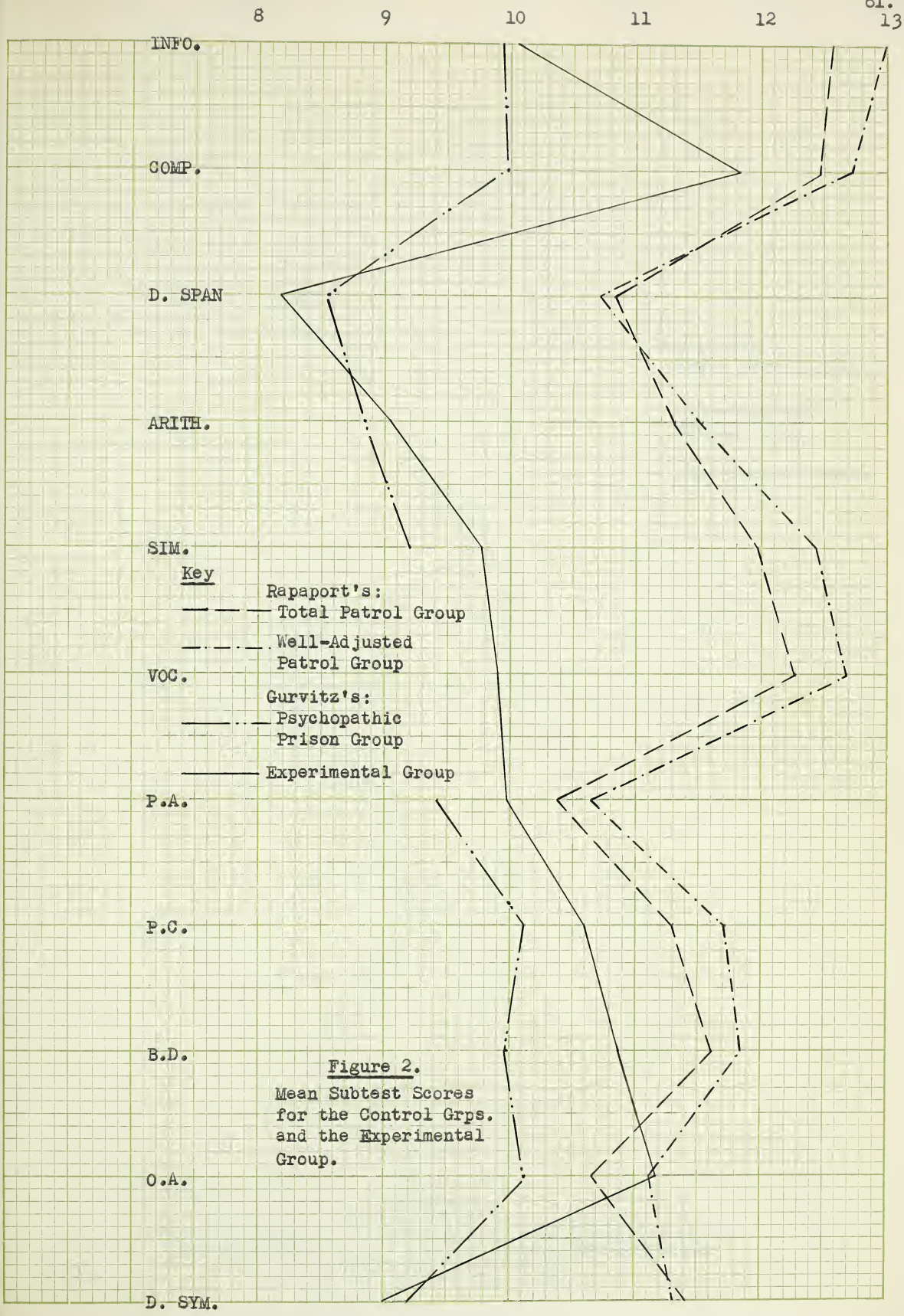
Gurvitz's:

- - - - - Psychopathic  
Prison Group

— — — — — Experimental Group

Figure 2.

Mean Subtest Scores  
for the Control Grps.  
and the Experimental  
Group.







INFO.

COMP.

D. SPAN

ARITH.

SIM.

P.A.

P.C.

B.D.

O.A.

D. SYM.

Key

Rapaport's:

Total Patrol Group

Well-Adjusted

Patrol Group

Experimental Group

Figure 3.

Mean Deviations of Subtest Scores from Vocabulary Level  
for Rapaport's Total and Well-Adjusted Patrol Groups  
and the Experimental Group





## Chapter V

### SUMMARY AND CONCLUSIONS

This study was concerned with the characteristics of "mentally competent offenders" as revealed by vocabulary scatter on the Wechsler-Bellevue Intelligence Scale. The problem was formulated in three hypotheses stating that:

1. The test performance on the Wechsler-Bellevue Intelligence Scale for mentally competent offenders differs from that obtained for a normal population.
2. There is a characteristic psychometric pattern on the Wechsler-Bellevue Intelligence Scale for mentally competent offenders.
3. The test performance on the Wechsler-Bellevue Intelligence Scale for mentally competent offenders differs from that of other offenders.

An experimental group was selected which consisted of forty adult white male offenders who had been clinically screened for "mental competence" during a period of remand for mental observation. The age range for the group was from 21 to 45 years inclusive, with the mean age estimated as 29.8 years. The level of education completed ranged from Grade I to a university degree; the mean educational level was 8.9 grades. Further analysis of the group revealed that 42.5% of the group were vocationally employed as laborers, while 5% were professionally employed. The



proportion of married and single subjects was almost equal. According to selection criteria, there was no history of previous hospitalization for any subject so that variables of personality maladjustment warranting clinical attention were considered eliminated.

The various offences committed by subjects of the group were broadly categorized. It was revealed that the greatest percentage of charges were for sex offences (32.5), while the next greatest frequencies were for offences with personal violence (27.5%), property offences (22.5%) and miscellaneous offences (17.5%) in this order. The relatively large percentage of sex offenders in the experimental group was explained by the fact that this type of offender is more frequently remanded for mental observation than are other types of offenders, and is therefore more frequently available for testing.

The length of sentence imposed upon the offenders of the experimental group ranged from "one day from arrest" to "life imprisonment". The mean length of sentence for the group, excluding the sentence to life imprisonment, was ten months, which was considered "mild" since the majority of the group were first offenders.

According to the selection criteria and description of the experimental group, a reasonably pure group of individuals who were "mentally competent" and "socially incompetent" were chosen for this study.

In testing the first hypothesis, the experimental group was compared to two normal control groups, Rapaport's Total Patrol



Group and Well-Adjusted Patrol Group. In this comparison, the controlled variable was "mental competence" describing both of Rapaport's groups as well as the experimental group; the independent variable was "social competence" characterizing only Rapaport's groups. It was tentatively assumed that a difference in test performance between the normal and experimental groups might be attributed to the independent variable of "social competence".

By means of the critical ratio, it was found that there was no significant difference in test performance between the two normal groups, and that differences from the experimental group were equivalent. Comparison of Rapaport's normal groups with the experimental group revealed significant differences at the 1% level of confidence in a positive direction for Arithmetic, Similarities, Vocabulary and Digit Symbol; the Well-Adjusted Patrol Group also differed on Picture Completion at the 5% level of confidence in a positive direction. However, the validity of these differences was considered tenuous since the intellectual level of the normal groups was considerably higher, in the Bright Normal range, than that of the experimental group, which was Average. It is therefore suggested that the first hypothesis be retested in a future investigation with the intellectual level of the control and experimental groups more comparable.

It would appear that the vocabulary scatter obtained for mentally competent offenders also differs from that of normals. This conclusion would seem well-founded in the literature (45) which upholds that scatter is not significantly affected by





discrepancies in intellectual level unless they are far above or below Average limits. While Rapaport's groups showed vocabulary scatter on the six subtests - Digit Span, Arithmetic, Picture Arrangement, Picture Completion, Object Assembly and Digit Symbol - the experimental group revealed scatter for three subtests only - Comprehension, Digit Span, and Object Assembly. This difference in scatter was the direct result of a lower Vocabulary level for the experimental group, reflecting a lower cultural background in non-verbal subjects. In this study, it was also considered a test characteristic of "social incompetence" for which a low cultural and educational level may be an underlying factor.

There was less scatter on the Full Scale and Performance Scale, and a greater amount of scatter on the Verbal Scale for the experimental group than for the normal groups. Since the mean Performance I.Q. exceeded the mean Verbal I.Q. of the experimental group, it was concluded that mentally competent offenders tend to score consistently better on the Performance Scale than on the Verbal Scale as compared to normals.

In testing the second hypothesis, the presence of vocabulary scatter in the test performance of the experimental group was determined by means of the critical ratio. Vocabulary scatter was found to exist for the group on Comprehension at the 1% level of confidence and Object Assembly at the 2% level of confidence in a positive direction; scatter existed for Digit Span at the 2% level of confidence in a negative direction.

According to Rapaport (45), near-equal subtest devia-



tions would be expected from individuals showing good personality adjustment which was assumed in the "mental competence" of the group. Therefore, the scatter pattern obtained for offenders of this kind was considered as possibly indicative of traits leading to "social incompetence". The interpretation of scatter shown by mentally competent offenders suggests the presence of anxiety manifested in an inability to profit from relatively good capacity for understanding practical and social situations, and an uncontrolled readiness for action.

Testing the third hypothesis involved comparing the experimental group with an offenders' control group. Gurvitz's psychopathic prison population was chosen for this comparison as an offenders' control group different in kind to the experimental group. All subtests but Vocabulary were compared, since Gurvitz had not utilized this subtest in his investigation. By means of the critical ratio, it was found that the experimental group differed from Gurvitz's group on Comprehension at the 1% level of confidence and on Object Assembly at the 5% level of confidence in a positive direction.

Since both Gurvitz's groups and the experimental group of offenders had been considered as "socially incompetent", and only the experimental group clinically rated as "mentally competent", the difference in performance on the subtests Comprehension and Object Assembly may have been influenced by the independent variable of "mental competence" characterizing the experimental group only. It may also be that the superiority of Comprehension for the experimental group is a test characteristic of "mental competence" in offenders.



While the validity of findings supporting the first hypothesis has been questioned due to a wide discrepancy in intellectual levels between the normal groups and the experimental group, the statistical results upholding the second and third hypothesis would seem valid. Since there was little discrepancy in the variables of age range and I.Q. for which the experimental and control groups of offenders were carefully selected, statistical findings for these groups would seem justified.

In summary, it may be concluded that:

1. The test performance on the Wechsler-Bellevue Intelligence Scale for mentally competent offenders would appear to differ from that obtained for a normal population; the experimental group was found to differ from Rapaport's normal groups on the six subtests - Information, Digit Span, Arithmetic, Similarities, Vocabulary and Digit Symbol.
2. There is a characteristic psychometric pattern in vocabulary scatter on the Wechsler-Bellevue Intelligence Scale for mentally competent offenders on the subtests - Comprehension, Digit Span and Object Assembly.
3. The test performance on the Wechsler-Bellevue Intelligence Scale for mentally competent offenders would also appear to differ from that of other types of offenders and it therefore may be considered as not characteristic of offenders in general; the experimental group was found to differ from Gurvitz's group of psychopaths, resident in a penitentiary, on the subtests - Comprehension and Object Assembly.





## Chapter VI

### RECOMMENDATIONS

Despite the careful selection of the experimental and control groups used in this study, some weaknesses and criticisms are warranted. Therefore, recommendations for eliminating them in future investigations of this kind are to be offered.

The statistical results obtained in testing the first hypothesis may not be considered entirely valid because of some discrepancy in the mean intellectual levels of the experimental group and the normal control groups. It is therefore suggested that the first hypothesis be retested in a future study, using experimental and control groups more comparable in intellectual level.

In testing the second hypothesis, the measure of scatter applied may be criticized. Since the experimental group would appear to consist largely of non-verbal subjects, vocabulary scatter may be questioned as a suitable measure for this group. Contrary to an empirical basis for utilizing vocabulary scatter, that the Vocabulary level is considered a "fair representative" of intellectual capacity (45), the vocabulary level for the group was relatively low. Because of the medium position of Vocabulary as compared to other subtest scores, it would appear that a similar psychometric pattern would have been revealed by mean scatter. On the basis of Whiteman's contention (59) that wide



deviations between intellectual capacity and functioning abilities signalize maladjustment, the measure of altitude scatter<sup>1</sup> might have presented a more fair picture of the type of adjustment characterizing mentally competent offenders. As no further research would appear to have been recorded for this measure since its introduction by Whiteman in 1950, its application on a group of non-verbal subjects such as those comprising the experimental group of this study would be interesting.

In testing the third hypothesis, the literature provided little choice for selection of an offenders' control group. A suggestion might therefore be made that further research be done with groups of offenders. The test findings and scatter patterns for various groups of offenders would be interesting in themselves, and they would permit further interesting comparisons.

For future investigations of this kind, a larger experimental group allowing the above considerations insofar as possible is suggested, in order to verify or refute the findings of the present study. It is also suggested that, since a psychometric pattern was found for mentally competent offenders, it may be that more specific scatter could be obtained for more particular types of mentally competent offenders, according to the nature of their offences. For comparative purposes, a similar study with female offenders should be both interesting and unique since it would

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1. "Altitude Scatter" is defined on p. 15



appear that no studies of this kind have been recorded in the literature.





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APPENDIX "A"

Section 16, Criminal Code of Canada (12):

- (1) No person shall be convicted of an offence in respect of an act or omission on his part while he was insane.
- (2) For the purposes of this section, a person is insane when he is in a state of natural imbecility or has disease of the mind to an extent that renders him incapable of appreciating the nature and quality of an act or omission or of knowing that an act or omission is wrong.
- (3) A person who has specific delusions, but is in other respects sane, shall not be acquitted on the ground of insanity unless the delusions caused him to believe in the existence of a state of things that, if it existed, would have justified or excused his act or omission.
- (4) Everyone shall, or until the contrary is proved, be presumed to be and have been sane.



APPENDIX "B"  
Test Data for the Experimental Group (N-40)

Case No.	I.Q.'S			SUBTEST SCORES										
	F.S.	Vb.	Pf.	Info.	Comp.	D. Sp.	Arith.	Sim.	Vocab.	P.A.	P.C.	B.D.	O.A.	D. Sym.
1.	94	93	97	8	11	9	4	10	7	7	9	8	14	8
2.	116	115	114	13	17	9	7	14	12	10	14	15	14	8
3.	108	104	112	10	15	9	4	9	10	9	13	8	12	8
4.	127	127	124	13	13	13	16	15	14	15	12	15	12	12
5.	97	99	94	6	11	6	13	9	9	10	4	7	8	9
6.	108	107	108	13	16	7	12	14	12	11	12	10	12	9
7.	96	95	99	10	12	6	4	11	9	11	10	8	10	11
8.	93	87	99	6	9	10	6	3	7	7	9	7	10	9
9.	117	108	124	10	13	10	7	14	11	14	12	14	13	13
10.	82	76	92	10	11	3	1	3	6	6	12	9	10	8
11.	76	78	77	4	9	7	1	8	5	4	6	8	10	3
12.	92	89	96	10	11	3	7	8	6	10	10	7	12	6
13.	94	81	107	7	7	2	6	5	8	8	9	11	12	8
14.	72	73	76	4	5	4	7	4	5	6	7	4	6	7
15.	96	91	103	6	13	7	7	8	7	8	12	10	12	11





APPENDIX "B" - Test Data for the Experimental Group cont'd.

Case No.	I.Q.'S				SUBTEST SCORES									
	F.S.	Vb.	Pf.	Info.	Comp.	D. Sp.	Arith.	Sim.	Vocab.	P.A.	P.C.	B.D.	O.A.	D. Sym.
16.	124	113	130	10	13	7	17	11	10	17	13	14	12	11
17.	102	101	102	11	16	7	1	9	12	8	12	10	11	6
18.	111	107	113	10	13	9	9	14	8	11	13	14	12	10
19.	122	126	116	14	11	11	16	15	14	13	12	12	16	11
20.	114	110	116	13	11	3	15	14	10	11	14	14	12	9
21.	93	95	92	8	10	9	7	9	8	7	9	10	9	10
22.	93	90	97	10	5	11	10	5	6	4	12	12	11	7
23.	118	113	121	13	13	13	9	9	12	14	14	11	12	13
24.	117	114	117	12	11	13	9	11	13	11	9	11	11	14
25.	90	82	101	10	8	4	1	5	9	11	10	10	11	4
26.	130	147	109	17	17	17	17	17	17	8	12	13	10	7
27.	119	120	117	13	14	9	10	14	13	11	13	13	12	10
28.	112	117	107	11	14	11	17	8	12	13	10	14	12	7
29.	86	84	89	6	10	4	3	8	8	6	8	7	12	4
30.	96	95	97	7	10	6	10	9	10	9	10	10	10	10



APPENDIX "B" - Test Data for the Experimental Group cont'd.

Case No.	I.Q.'S			SUBTEST SCORES										
	F.S.	Vb.	Pf.	Info.	Comp.	D. Sp.	Arith.	Sim.	Vocab.	P.A.	P.C.	B.D.	O.A.	D. Sym.
31.	119	119	121	13	14	13	13	10	13	12	13	16	12	13
32.	97	93	102	6	9	7	7	11	7	8	12	9	9	6
33.	105	101	109	4	11	9	15	10	8	15	8	14	12	8
34.	112	111	111	12	13	10	12	9	11	17	12	7	11	7
35.	114	113	116	13	12	10	13	11	11	10	14	14	12	10
36.	122	123	118	12	15	14	12	13	12	12	8	11	10	14
37.	111	108	112	14	14	7	9	7	13	9	12	13	11	10
38.	96	95	99	11	10	4	6	11	10	11	9	9	12	9
39.	103	101	104	11	14	4	9	10	10	9	7	13	12	10
40.	108	109	107	11	12	10	13	6	11	6	7	13	12	10



APPENDIX "B"  
Subject Data for the Experimental Group (N= 40)

CASE NO.	EDUCATION (Grade ) (Completed)	MARITAL <sup>1</sup> STATUS	<u>AGE</u>		OCCUPATION
			<u>Years</u>	<u>Months</u>	
1.	VI	M	27	1	Plumber
2.	X	S	22	2	Laborer
3.	VIII	M	31	1	Farmer
4.	XII	M	29	1	Photographer
5.	X	M	38	11	Railroad Switchtender
6.	VIII	M	27	10	Electrician
7.	VIII	S	21	11	Railroad Watchman
8.	VII	M	36	2	Cook
9.	VIII	M	27	11	Driver
10.	V	S	22	1	Laborer
11.	V	S	25	3	Laborer
12.	I	S	27	1	Laborer
13.	VIII	M	39	11	Sheetmetal Worker
14.	V	S	25	1	Farmer
15.	VIII	M	21	1	Taxi-driver
16.	X	M	35	11	Carpenter
17.	VIII	S	32	4	Laborer
18.	X	S	23	1	Laborer
19.	XI	M	32	1	Accountant
20.	2 years Univ.	S	25	6	Student
21.	VIII	M	23	5	Laborer

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 1. M= Married; S= Single





APPENDIX "B" - Subject Data for the Experimental Group cont'd.

CASE NO.	EDUCATION ( GRADE ) (COMPLETED)	MARITAL STATUS	AGE		OCCUPATION
			Years	Months	
22.	IX	S	26	9	Farmer
23.	X	S	27	4	Laborer
24.	Degree Univ.	S	39	6	Teacher
25.	IX	S	30	11	Laborer
26.	3 yrs. Univ.	S	39	7	Teacher
27.	XI	S	30	6	Salesman
28.	X	M	23	5	Laborer
29.	VIII	M <sup>1</sup>	33	2	Painter
30.	VII	M	24	11	Laborer
31.	X	S	23	10	Mechanic
32.	VIII	M	37	7	Laborer
33.	VIII	S	23	0	Laborer
34.	VIII	M	32	0	Laborer
35.	XIII	M	28	4	Cook
36.	IX	M	42	4	Salesman
37.	VIII	S	34	11	Laborer
38.	VIII	S	23	2	Laborer
39.	IX	M	28	1	Laborer
40.	XI	M	36	11	Mechanic

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1. "Separated" at the time of offence.



APPENDIX "B"  
Legal Data for the Experimental Group (N= 40)

<u>CASE NO.</u>	<u>OFFENCE COMMITTED<sup>1</sup></u>	<u>LENGTH OF SENTENCE</u>
1.	Indecent Act	30 days
2.	Indecent Act	3 months
3.	Dangerous Driving	30 days
4.	Utter Threats	Bound over 12 months
5.	Contributing to Juvenile Delinquency	2 years
6.	Intoxication	8 days
7.	Indecent Act	30 days
8.	False Pretences	1 year
9.	Indecent Act	3 months
10.	Theft	6 months
11.	Gross Indecency	2 years less a day
12.	Gross Indecency	18 months
13.	Theft	9 months
14.	Public Mischief	30 days
15.	Indecent Act	2 months
16.	Threatening	1 year suspended
17.	False Pretences	1 month
18.	Shooting with Intent	3 years
19.	Non-support	6 months
20.	Murder	Life Imprisonment

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1. The nature of the various offences committed are outlined in the Criminal Code of Canada (12).



APPENDIX "B" - Legal Data for the Experimental Group cont'd.

<u>CASE NO.</u>	<u>OFFENCE COMMITTED</u>	<u>LENGTH OF SENTENCE</u>
21.	Wounding	2 $\frac{1}{2}$ years
22.	False Pretences	2 months
23.	Indecent Assault	1 year suspended
24.	Cause Disturbance	30 days
25.	Contributing to Juvenile Delinquency	3 months
26.	Indecent Act	2 years suspended
27.	Cause Disturbance	1 day from arrest
28.	Manslaughter	1 year
29.	Cause Disturbance	15 days
30.	Shopbreaking and Theft	3 months
31.	Indecent Act	1 year suspended
32.	Attempted Suicide	1 year suspended
33.	Illegal Possession of Liquor	10 days
34.	Attempted Suicide	1 year suspended
35.	False Pretences	1 year suspended
36.	Assault	15 days
37.	Housebreaking and Theft	3 years
38.	Assault	1 year suspended
39.	Contributing to Juvenile Delinquency	18 months suspended
40.	Attempted Suicide	1 year.











**B29771**